a shoulder of the transport arm for rotating the wrist about the axis of rotation, and

to effect extension of the transport arm for radially displacing the wrist of the transport arm relative to the axis of rotation at the shoulder of the transport arm, wherein the extension of the transport arm to radially displace the wrist causes rotation of the end effector about the wrist to rotate the substrate about the axis of rotation at the shoulder of the transport arm in concert with rotation of the wrist about the axis of rotation at the shoulder of the transport arm so that the substrate is moved along one of a number of generally parallel axes of translation straddling the drive section.

5. (Twice Amended) A method for transporting a substrate into and out of a substrate holding area comprising the steps of:

providing the substrate on an end effector of a transport arm;

rotating the transport arm as a unit about an axis of rotation; and

moving the end effector of the transport arm to radially displace the end effector relative to the axis of rotation, the end effector being moved from an initial position to a final position, the initial and final positions of the end effector being connected by an axis of translation of the end effector;

wherein the radial displacement of the end effector complements the rotation of the transport arm about the axis of rotation to result in the substrate being substantially rectilinearly translated along the axis of translation to and from the substrate holding area, the axis of translation being one of two generally parallel axes of translation on opposite sides of the drive section.

28. (Amended) A substrate transport apparatus comprising:

a drive section with a first drive shaft, and a second drive shaft;

a robot transport arm mounted to the drive section, the robot transport arm including an upper arm, a forearm pivotably connected to the upper arm to pivot about an elbow of the upper arm, and an end effector pivotably connected to the forearm to pivot about a wrist of the forearm, the upper arm being connected to the first drive shaft so that the upper arm is rotated about the drive section when the first drive shaft is rotated, the elbow being connected to the second drive shaft so that the forearm is rotated about the elbow when the second drive shaft is rotated, the end effector being slaved to the forearm so that when the forearm rotates about the elbow the end effector rotates about the wrist;

wherein the robot transport arm is adapted to transport substrates with the end effector along

generally parallel axes of translation straddling the drive section to and from two side by side substrate holding areas disposed along a side of a substrate processing apparatus with the drive section being located in only one location relative to the substrate processing apparatus.

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29. (Amended) A method for transporting a substrate into and out of a substrate holding area on a substrate processing apparatus comprising the steps of:

providing the substrate processing apparatus with a transport arm connected to a drive section having two drive shafts;

providing the substrate on an end effector of the transport arm, the end effector being rotatably mounted to a wrist of the transport arm; and

rotating the two drive shafts to effect rotation of the transport arm about an axis of rotation at a shoulder of the transport arm for rotating the wrist about the axis of rotation, and

to effect extension of the transport arm to radially displace the wrist of the transport arm relative to the axis of rotation at the shoulder of the transport arm, wherein the extension of the transport arm when the second drive shaft is rotated effects rotation of the end effector about the wrist, the rotation of the transport arm about the axis of rotation at the shoulder, the extension of the transport arm to radially displace the wrist relative to the axis of